

Effect of PNF Technique on Gait Parameters and Functional Mobility in Hemiparetic Patients

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Abstract

Stroke, also known as cerebrovascular accident (CVA) is an acute neurologic injury in which the blood supply to a part of the brain is interrupted. It is reported that 1.2% of total deaths occur in India due to stroke. Stroke is the 3rd leading cause of death and the 2nd leading cause of disability. Common problems after stroke are impaired motor functions including balance and gait, sensory deficits, perceptual deficits, cognitive limitations, visual deficits, aphasia and depression. The ability to walk independently is a prerequisite for many daily activities. Many patients remain unable to walk or have difficulties with walking after stroke. A common clinical observation was that the stance phase on the affected side was considerably shorter than that of sound leg. Hemiplegics vary in their dependence on a walking aid and in amount of weight they transfer through the affected leg. The objective of the present study is to evaluate the effect of PNF techniques on the gait parameters and functional mobility in hemiplegic patients. Two group pre test- post test design. A sample of convenience of 30 subjects affected by cerebrovascular accident of ischemic injury took part in this study. They were divided into two groups i.e. an Experimental group and a Control group with 15 patients in each group. The subjects of this study were the residents of northern Haryana and the mean age of the patients was 59.30 years. Patients were assessed before commencement and after the completion of treatment sessions by a fixed battery of tests on Stride length, Gait Velocity, Cadence and Functional Mobility parameters with measuring tape, stop watch and Rivermead Mobility Index respectively. The results of this study demonstrated that the PNF technique has significant effect on gait parameters & functional mobility as compared to conventional therapy in patients with hemiplegia. The findings show that the walking speed has a significant effect on functional mobility in stroke patient.

Keywords: CVA, Stroke, PNF, Stride length, Gait Velocity, Cadence and Functional Mobility

Introduction

Stroke, also known as cerebrovascular accident (CVA) is an acute neurologic injury in which the blood supply to a part of the brain is interrupted. It is reported that 1.2% of total deaths occur in India due to stroke. Stroke is the 3rd leading cause of death and the 2nd leading cause of disability (Aela et al, 2007). Major risk factors are Hypertension, Heart disease and Diabetes (O'Sullivan & Schmitz, 2001). Apart

from these, other risk factors for stroke are cigarette smoking, blood cholesterols, oral contraceptives, obesity, alcohol, social deprivation, physical inactivity, impaired ventilatory function and maternal history of stroke (Walton, 2003).

Several population – based surveys on stroke were conducted from different Parts in India. Recent studies showed that the age adjusted annual incidence rate was 105 per 100,000 in the urban community